

Application No. 09/738,988

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for mixed human and computer-supported distributed scheduling of a task according to scheduling decisions within a plurality of workplaces, said workplaces being connected to each other and to a shared negotiation facility via a computer network, the method comprising:

~~a) expressing a first scheduling decision by manual modification in a scheduling board within a first of said workplaces;~~

[[b)]] recording [[said]] a first scheduling decision manually expressed on a first scheduling board within a first of said workspaces and creating first scheduling decision data which represent the first scheduling decision in a computer-readable form; [[,]]

recording a second scheduling decision manually expressed on a second scheduling board within a second of said workspaces and creating second scheduling decision data which represent the second scheduling decision in a computer-readable form;

recognizing requests for task outsourcing manually expressed on the scheduling boards of said workspaces using a first shape and requests for task in-sourcing manually expressed on the scheduling boards of said workspaces using a second shape distinct from the first shape;

[[c)]] transferring the first scheduling decision data and the second scheduling decision data via the computer network to the shared negotiation facility; [[,]]

[[d)]] negotiating said task within the shared negotiation facility by combining the first scheduling decision data with the second scheduling decision data received from at least [[a]] said first of said workplaces and said second of said workplaces and creating negotiation result data which represent results of negotiating said task; [[,]] and

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[[e]] transferring said negotiation result data to at least said first [[workplace]] and said second of said workspaces for indicating scheduling information specifying at least one of:

(i) in-sourcing said task to said first of said workspaces when the second scheduling decision indicates, using the first shape, a request for task outsourcing and the first scheduling decision indicates, using the second shape, a free time slot for task in-sourcing that satisfies start time and completion time of the second scheduling decision; and

(ii) outsourcing said task from said first of said workspaces when the first scheduling decision indicates, using the first shape, a request for task outsourcing and the second scheduling decision indicates, using the second shape, a free time slot for task-insourcing that satisfies start and completion time of the first scheduling decision.

2. (Currently Amended) The method according to claim 1, wherein recording [[expressing]] said first scheduling decision manually expressed on the first scheduling board within a first of said workspaces further comprises [[drawing]] recording on a manual board a schedule and a control mark representing the scheduling decision for task in-sourcing when the control mark has the first shape and task outsourcing when the control mark has the second shape on a manual board and wherein said scheduling decision data are created as a digitized photograph of the manual board.

3. (Currently Amended) The method according to claim 2, ~~wherein the results of the negotiation step are visualized by a projector that projects further comprising projecting said negotiation result data negotiated within the shared negotiation facility and transferred to said first of said workspaces using different colored lights onto the schedule~~ [[drawn]] expressed on the manual board.

4. (Currently Amended) The method according to claim 1 [[2]], wherein the first scheduling board is a large screen display.

5. (Currently Amended) The method according to claim 4, wherein the results of the negotiation are visualized [[by]] on the large screen display.

6. (Currently Amended) The method according to claim [[5]] 3, wherein

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said first of said workspaces and said second of said workspaces are printshops,
respectively [[workplace is a printshop]].

7. (Original) The method according to claim 6, wherein said task is a print job.

8. (Currently Amended) The method according to claim 3, wherein said recording further comprises recording a digitized photograph of the manual board 7,
~~wherein the first scheduling decision comprises a request for one of insource work and outsource work.~~

9. (Currently Amended) The method according to claim 2 [[8]], further comprising:

~~expressing a second scheduling decision by manual modification in the scheduling board within the first of said workplaces,~~

~~recording the second scheduling decision and creating second scheduling decision data which represent the second scheduling decision in a computer-readable form, and~~

recording a third scheduling decision manually expressed on a third scheduling board within a third of said workspaces and creating third scheduling decision data which represent the third scheduling decision in a computer-readable form; and

identifying no control mark recorded in the [[second]] third scheduling decision data; said identifying inhibiting transfer of the [[second]] third scheduling decision data via the computer network to the shared negotiation facility.

10. (Currently Amended) The method according to claim 2 [[1]], wherein [[the first]] scheduling decision data representing a scheduling decision manually expressed on a scheduling board within said workspaces is transferred via the computer network to the shared negotiation facility only if it contains a control mark.

11. (Currently Amended) An apparatus for mixed human and computer supported distributed scheduling of tasks within a plurality of workplaces, comprising:

[[a)]] a first scheduling board located in a first of said workplaces and a

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second scheduling board located in a second of said workplaces; [[for receiving a manual scheduling decision,]]

[[b)]] [[a recording device]] recording devices located in at least the first and the second workplaces for recording said scheduling decision and creating scheduling decision data which represent the scheduling [[decision]] decisions in a computer-readable form; [[,]]

[[c)]] a shared negotiation facility for negotiating a scheduling task according to the scheduling [[decision]] decisions among [[the rest of]] said plurality of workplaces; [[,]]

[[d)]] a computer network connecting said workplaces to each other and to the shared negotiation facility for transferring said scheduling decision data to said shared negotiation facility;

wherein said first and said second workplaces, said shared negotiation facility, and said computer network operating together to:

record a first scheduling decision manually expressed on the first scheduling board and create first scheduling decision data which represent the first scheduling decision in a computer-readable form;

record a second scheduling decision manually expressed on the second scheduling board and create second scheduling decision data which represent the second scheduling decision in a computer-readable form;

recognize requests for task outsourcing manually expressed on the scheduling boards of said workspaces using a first shape and requests for task in-sourcing manually expressed on the scheduling boards of said workspaces using a second shape distinct from the first shape;

transfer the first scheduling decision data and the second scheduling decision data via the computer network to the shared negotiation facility;

negotiate said scheduling task within the shared negotiation facility by combining the first scheduling decision data with the second scheduling decision data received from at least said first of said workplaces and said second of said workplaces and create negotiation result data which represent results of negotiating said scheduling task; and

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transfer said negotiation result data to at least said first and said second of said workspaces for indicating scheduling information specifying one of:

(i) in-sourcing said scheduling task to said first of said workspaces when the second scheduling decision indicates, with the first shape, a request for task outsourcing and the first scheduling decision indicates, with the second shape, a free time slot for task in-sourcing that satisfies start time and completion time of the second scheduling decision; and

(ii) outsourcing said scheduling task from said first of said workspaces when the first scheduling decision indicates, with the first shape, a request for task outsourcing and the second scheduling decision indicates, with the second shape, a free time slot for task in-sourcing that satisfies start and completion time of the first scheduling decision.

Please add the following claims:

12. (New) The apparatus according to claim 11, wherein said first scheduling decision manually expressed on the first scheduling board within a first of said workspaces further comprises a manual board having recorded thereon a schedule and a control mark representing the scheduling decision for task in-sourcing when the control mark has the first shape and task outsourcing when the control mark has the second shape.

13. (New) The apparatus according to claim 12, further comprising a projector for projecting said negotiation result data negotiated within the shared negotiation facility and transferred to said first of said workspaces using different colored lights onto the schedule expressed on the manual board.

14. (New) The apparatus according to claim 11, wherein the first scheduling board is a large screen display, on which the results of the negotiation are visualized.

15. (New) The apparatus according to claim 13, wherein said first of said workspaces and said second of said workspaces are a first printshop and a second printshop, respectively.

16. (New) The apparatus according to claim 15, wherein said first

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scheduling task comprises scheduling a task for a print job.

17. (New) The apparatus according to claim 12, wherein said first and said second workplaces, said shared negotiation facility, and said computer network operating together to:

record a third scheduling decision manually expressed on a third scheduling board within a third of said workspaces and create third scheduling decision data which represent the third scheduling decision in a computer-readable form; and

inhibit transfer of the third scheduling decision data via the computer network to the shared negotiation facility when no control mark is identified recorded in the third scheduling decision data.

18. (New) The apparatus according to claim 11, wherein said first workplace operates to manually express said first scheduling decision on the first scheduling board located within said first of said workspaces by:

recording at least a first time slot with a control mark and at least a second time slot without a control mark; and

searching in the first scheduling decision data for time slots with control marks;

wherein said transferring the first scheduling decision data to the shared negotiation facility comprises transferring only time slots with control marks.

19. (New) The method according to claim 1, wherein said recording said first scheduling decision manually expressed on the first scheduling board located within said first of said workspaces further comprises:

recording at least a first time slot with a control mark and at least a second time slot without a control mark; and

searching in the first scheduling decision data for time slots with control marks;

wherein said transferring the first scheduling decision data to the shared negotiation facility comprises transferring only time slots with control marks.

20. (New) A method for mixed human and computer-supported distributed scheduling of a task according to scheduling decisions within a plurality of

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workplaces, said workplaces being connected to each other and to a shared negotiation facility via a computer network, the method comprising:

recording a first scheduling decision and a second scheduling decision with at least one time slot with a control mark and at least one time slot without a control mark manually expressed on a first scheduling board within a first of said workspaces and a second scheduling board within a second of said workspaces, respectively;

recognizing requests for task outsourcing manually expressed on the scheduling boards of said workspaces using a first shape and requests for task in-sourcing manually expressed on the scheduling boards of said workspaces using a second shape distinct from the first shape;

creating first scheduling decision data and second scheduling decision data which represent the first scheduling decision and the second scheduling decision data, respectively, in a computer-readable form;

searching in the first scheduling decision data and the second scheduling decision data for time slots with control marks;

transferring in-source and outsource time slots with control marks in the first scheduling decision data and the second scheduling decision data via the computer network to the shared negotiation facility;

negotiating said task within the shared negotiation facility by combining the first scheduling decision data with the second scheduling decision data received from at least said first of said workplaces and said second of said workplaces and creating negotiation result data which represent results of negotiating said task; and

transferring said negotiation result data to at least said first and said second of said workspaces for indicating scheduling information specifying one of:

(i) in-sourcing said task to said first of said workspaces when the second scheduling decision indicates said task with a control mark specifying, with the first shape, a request for task outsourcing, and the first scheduling decision indicates a free time slot with a control mark specifying, with the second shape, a request for task in-sourcing that satisfies start time and completion time of the second scheduling decision; and

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(ii) outsourcing said task from said first of said workspaces when the first scheduling decision indicates said task with a control mark specifying, with the first shape, a request for task outsourcing, and the second scheduling decision indicates a free time slot with a control mark specifying, with the second shape, a request for task in-sourcing that satisfies start time and completion time of the first scheduling decision.